

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:**Siegenthaler, Peter**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-022382**Date Inspected:** 03-Apr-2011**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1900**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Li Yang and Zhu Zhong Hai**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** OBG Trial Assembly**Summary of Items Observed:**

On this date Caltrans OSM Quality Assurance (QA) Inspector Mr. S. Manjunath Math was present during the time noted above for observations relative to the work being performed.

This QA Inspector randomly observed the following work in progress:

Orthotropic Box Girder (OBG) at Trial Assembly Areas

Segment 12AE (Truss Post and Road Barrier Brackets)

This QA Inspector witnessed the final bolt tension verification on bolts installed at Corner Assembly connecting the X37A Brackets, Road Barrier Brackets, Inclined Truss Post and Vertical Truss Post at Cross Beam and Bike Path side between Panel Points (PP) 109 to PP 110 and PP 110 to PP 111 for Segment 12AE. The QA Inspector verified the bolt tension on a random basis and the results appeared to be in general compliance. The Inspection was performed against Notification No. 00638 dated April 03, 2011.

The bolt sizes used were M22 x 55 RC Lot # DHGM220011 and the final torque value established was 457 N-m.

The bolt sizes used were M22 x 85 RC Lot # DHGM220121 and the final torque value established was 393 N-m.

The bolt sizes used were M22 x 120 RC Lot # DHGM220054 and the final torque value established was 497 N-m.

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The bolt sizes used were M24 x 60 RC Lot # DHGM240001 and the final torque value established was 666 N-m.

The bolt sizes used were M24 x 65 RC Lot # DHGM240013 and the final torque value established was 540 N-m.

The bolt sizes used were M24 x 80 RC Lot # DHGM240011 and the final torque value established was 533 N-m.

The Manual Torque wrench used was Serial No. XO2-666.

Please reference the pictures attached for more comprehensive details.

Segment 12AE (Truss Post and Road Barrier Brackets)

This QA Inspector witnessed the final bolt tension verification on bolts installed at Corner Assembly connecting the X37A Brackets and Road Barrier Brackets at Cross Beam and Bike Path side between Panel Points (PP) 111 to PP 111.5; PP 111.5 to PP 112; PP 112 to PP 112.5; and PP 112.5 to PP 113 for Segment 12AE. The QA Inspector verified the bolt tension on a random basis and the results appeared to be in general compliance. The Inspection was performed against Notification No. 00638 dated April 03, 2011.

The bolt sizes used were M22 x 120 RC Lot # DHGM220054 and the final torque value established was 497 N-m.

The Manual Torque wrench used was Serial No. XO2-666.

Please reference the pictures attached for more comprehensive details.

Segment 12AE (Connection Clips)

This QA Inspector witnessed the final bolt tension verification on bolts connecting the T-Rib connections clips at Side Panel (Cross Beam and Bike Path side) and at Bottom Panel at the Panel Points (PP) 109, PP 110, PP 111, PP 111.5, PP 112 and PP 112.5 for Segment 12AE. The QA Inspector verified the bolt tension on a random basis and the results appeared to be in general compliance. The Inspection was performed against Notification No. 00639 dated April 03, 2011.

The bolt sizes used were M16 x 45 RC Lot # DHGM160049 and the final torque value established was 180 N-m.

The bolt sizes used were M16 x 50 RC Lot # DHGM160004 and the final torque value established was 180 N-m.

The bolt sizes used were M16 x 55 RC Lot # DHGM160012 and the final torque value established was 200 N-m.

The bolt sizes used were M16 x 65 RC Lot # DHGM160006 and the final torque value established was 180 N-m.

The Manual Torque wrench used was Serial No. XO2-114.

Please reference the pictures attached for more comprehensive details.

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Segment 12AE (Connection Clips)

This QA Inspector witnessed the final bolt tension verification on bolts connecting the T-Rib connections clips at Bottom Panel at work point E3 (Bike Path side) and work point E4 (Cross Beam side) at the Panel Points (PP) 111 for Segment 12AE. The QA Inspector verified the bolt tension on a random basis and the results appeared to be in general compliance. The Inspection was performed against Notification No. 00639 dated April 03, 2011.

The bolt sizes used were M16 x 70 RC Lot # DHGM160044 and the final torque value established was 125 N-m.

The Manual Torque wrench used was Serial No. XO2-114.

Please reference the pictures attached for more comprehensive details.

Traveler Rails at Bay # 10

This QA Inspector performed Dimension Control Inspection on the Traveler Rails 26TR1-001 and 27TR1-001 for the following measurements and observed measured dimension in compliance contact document. Inspection was performed against the Inspection Notification # 008721 dated April 03, 2011 at Bay # 10.

Traveler Rails Thickness at typical section.

Traveler Rails Flange width at typical section.

Traveler Rails Depth at typical section.

Traveler Rails Flange curl at typical section.

Traveler Rails Traveler Rail length.

Traveler Rails Sweep.

The measurements were recorded in the Dimension Control Plan (DCP) on a separate form and submitted to the Lead Inspector and Engineer for review and disposition. The result of the inspection was informed to ZPMC QC Mr. Sun Zi Wang, ABF Mr. Yang Yi Heng and Caltrans Lead Inspector Mr. Mark Miller.

Please reference the pictures attached for more comprehensive details.

Segment 13AE (Side Panel I-Stiffener to Floor Beam)

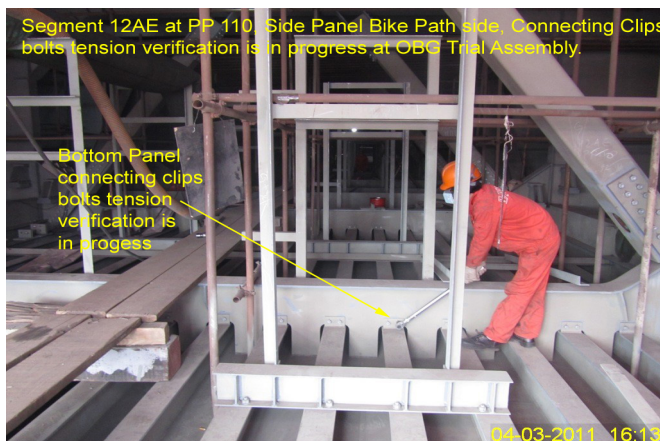
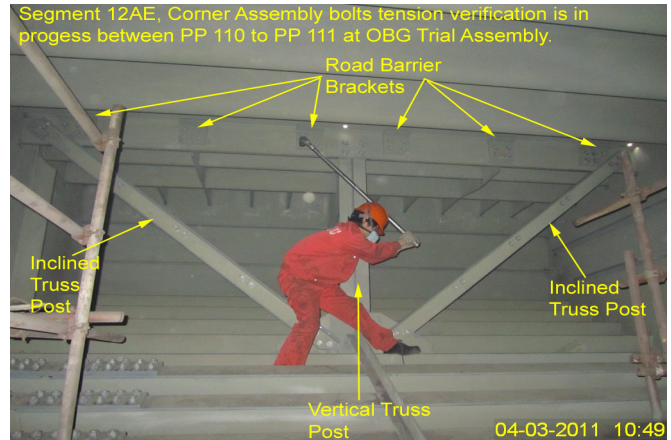
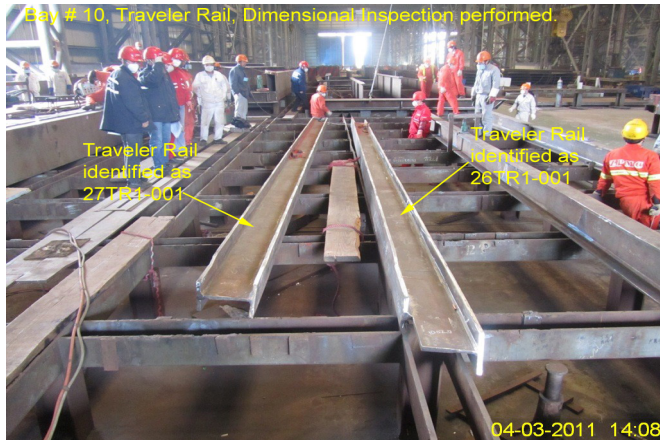
This QA Inspector observed the in-process welding by Shielded Metal Arc Welding (SMAW) process on a Complete Joint Penetration (CJP) weld. The Weld joint was designated as Seg3013R-191. The welder identification was 067609 and observed welding in the 3G (Vertical) position using approved Welding Procedure Specification WPS-B-P-2213-Tc-U4b-FCM-1. The piece mark was identified as the weld connecting the Side Panel I-Stiffener to Floor Beam at Counter Weight side, at PP 117.5.

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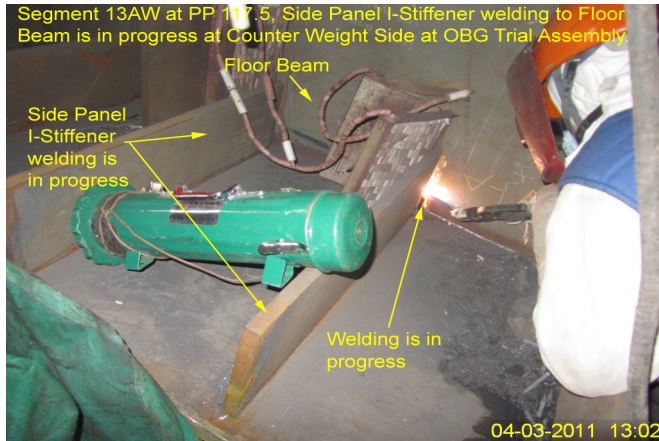
Please reference the pictures attached for more comprehensive details.

Unless otherwise noted, all work observed on this date appeared to generally comply with applicable contract documents.



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Summary of Conversations:

No relevant conversations were reported on this date.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Eric Tsang 15000422372, who represents the Office of Structural Materials for your project.

Inspected By:	Math,Manjunath	Quality Assurance Inspector
Reviewed By:	Miller,Mark	QA Reviewer
